IN THE CLAIMS

Please amend the claims as follows:

1.   (Cancelled)

2.   (Cancelled)

3.   (Previously Presented) The stereo camera system of claim 5, wherein the camera is a still camera and the at least one stereo image is a still image.

4.   (Previously Presented) The stereo camera system of claim 5, wherein the camera is a video camera and the at least one stereo image is a sequence of video images.

5.   (Currently Amended) A stereo camera system comprising:

stereo imaging means for outputting at least one stereo image, said stereo imaging means including:

a camera;

a set of mirrors angled with respect to each other at an adjustable angle relative to a centrally located common plane intersecting said camera, each mirror disposed an adjustable distance from the camera along the common plane, for directing light from an object reflected in said mirrors along a straight line of sight from said mirrors to the camera, for producing a stereo effect in the output of the camera;

recognition means for analyzing stereo image data from the camera to locate an object of interest in a field of view of the camera and to determine ~~at least one of~~ a distance of the object of interest from the stereo imaging means and a size of the object of interest, wherein said analysis of the stereo image data includes extracting multiple features from each image and matching the multiple features across different views; and

adjusting means for automatically changing at least one system parameter which affects the spatial resolution of the object of interest based on the analysis of the stereo image data, the adjusting means comprising:

angle adjustment means for adjusting the angle of the set of mirrors relative to the centrally located plane;

distance adjustment means for adjusting the distance between the camera and the set of mirrors; and

focal length adjustment means for changing a focal length of the camera.

6.   (Previously Presented) The stereo camera system of claim 5, further comprising a controller for controlling the angle, distance, and focal length adjustment means based on an input signal from the recognition means.

7.-11. (Cancelled).

12.   (Previously Presented)   The stereo camera system of claim 5, wherein the recognition means is a stereo vision system.

13.-21. (Cancelled).

22.   (Currently Amended) A stereo camera system comprising:

two video cameras, each cameras being angled at an angle relative to each other and separated by a distance from each other, for outputting a sequence of stereo video images;

recognition system which analyzes the stereo video images during operation of the video cameras to output the stereo video images to locate an object of interest in a field of view of the video cameras and determine ~~at least one of~~ a distance of the object of interest from the video cameras and a size of the object of interest, wherein said analysis of the stereo video images includes extracting multiple features from each image_and matching the multiple features across different views; and

a controller which, based on input from the recognition system, controls:

a focal length adjustment mechanism which changes a focal length of at least one of the two cameras based on the analysis of the stereo video images;

an angle adjustment mechanism which adjusts the angle of the video cameras relative to each other based on the analysis of the stereo video images; and

a baseline adjustment mechanism which adjusts the distance by which the video cameras are separated based on the analysis of the stereo video images.

23. (Previously Presented) The stereo camera system of claim 5, wherein the mirrors have adjacent ends positioned at a common point.

24. (Previously Presented) The stereo camera system of claim 23, wherein the mirrors are disposed for directing the light from the object which is reflected in the mirrors directly from the mirrors to the camera.

25.-29. (Cancelled)

30. (Previously Presented) The stereo camera system of claim 12, wherein the recognition means analyzes the stereo image data during operation of the camera.

31. (Cancelled).

32. (Previously Presented) The stereo camera system of claim 22, further including:

a distance adjusting mechanism which is controlled by the controller to adjust a distance between at least one of the video cameras and the object of interest.

33. (Currently Amended) A method of stereo imaging using a stereo camera system which includes a camera and a pair of mirrors separated by a separation distance along a

base plane and angled by an angle relative to a common central plane, the method comprising:

outputting at least one stereo image of an object of interest from the camera;

analyzing the at least one stereo image output by the camera, wherein said analysis of the at least one stereo image includes<u>:</u>

<u>determining a distance of the object of interest from the camera and a size of the object of interest, and</u>

extracting multiple features from each image and matching the multiple features across different views; and

adjusting the angle relative to the common central plane based on the analysis of the at least one stereo image.

34.   (Previously Presented) The method of claim 33, further including:

adjusting a distance between the camera and the mirrors based on the analysis of the at least one stereo image.

35.   (Cancelled).

36.   (Previously Presented) The method of claim 34, further including:

adjusting a focal length of the camera based on the analysis of the at least one stereo image.

37.   (Previously Presented) The method of claim 34, wherein the pair of mirrors abut at and pivot on the common central plane.

38.   (Previously Presented) The method of claim 33, wherein the at least one stereo image includes a series of stereo video images and the analyzing step further includes:

analyzing the series of video images during the outputting of the series of video images.

39.   (Previously Presented) The stereo camera system of claim 5, wherein each of the angle adjustment means, the distance adjustment means, and the focal length adjustment is separately adjustable relative to the other.